

## CLAIMS

1        1. A method of electroacoustical transducing comprising  
2                controlling audio electrical signals to be provided to a pair of electroacoustical  
3                transducers of an array to achieve directivity and acoustic volume characteristics that are  
4                varied with respect to a parameter associated with operation of the array, the controlling of  
5                the signals resulting in a change in the radiated acoustic power spectrum of the array as the  
6                characteristics are varied, and

7                compensating for the change in the radiated acoustic power spectrum of the array.

1        2. The method of claim 1 in which the compensating for the change in the  
2                acoustic power spectrum comprises maintaining the radiated relative acoustic power  
3                spectrum substantially uniform.

1        3. The method of claim 1 in which the compensating occurs prior to the  
2                controlling.

1        4. The method of claim 1 in which the change in the acoustic power spectrum  
2                resulting from the controlling of the signals is predicted, and the compensating is based on  
3                the predicting.

1        5. The method of claim 1 in which the compensating is based on a volume level  
2                selected by a user.

1        6. The method of claim 1 in which the compensating is based on a signal level  
2                detected in the controlled audio electrical signals.

1        7. The method of claim 1 in which the controlling comprises reducing the  
2                amplitude of one of the audio electrical signals for higher acoustic volume levels.

1        8. The method of claim 7 in which the controlling comprises combining two  
2                components of an intermediate electrical signal in selectable proportions.

1        9.     The method of claim 1 in which the controlling of the audio electrical signals  
2 comprises adjusting a level of one of the signals over a limited frequency range.

1        10.    The method of claim 1 in which controlling the audio electrical signals  
2 includes processing one of the signals in a high-pass filter and processing the other of the  
3 signals in a complementary all-pass filter.

1        11.    Electroacoustical transducing apparatus comprising  
2              an input terminal to receive an input audio electrical signal, and  
3              a plurality of electroacoustical transducers in an array  
4              circuitry constructed and arranged to generate two related output audio electrical  
5              signals from the input audio signal coupled to said electroacoustical transducers of an array,  
6              and to achieve predefined directivity and acoustic volume characteristics that are varied with  
7              respect to a parameter associated with operation of the array and to compensate for a change  
8              in acoustic power spectrum of the array that results from the controlling of the signals.

1        12.    The apparatus of claim 11 in which the circuitry comprises a dynamic  
2              equalizer.

1        13.    The apparatus of claim 12 in which the dynamic equalizer includes a pair of  
2              signal processing paths and a combiner to combine signals that are processed on the two  
3              paths.

1        14.    The apparatus of claim 12 in which the circuitry is also constructed and  
2              arranged to compensate for the change based on a volume level.

1        15.    An electroacoustical transducer array comprising,  
2              a source of related electrical signal components  
3              a plurality of electroacoustical transducers driven respectively by said related  
4              electrical signal components,  
5              an input terminal to receive an input audio electrical signal, and  
6              circuitry constructed and arranged to generate two related output audio electrical  
7              signals coupled to said electroacoustical transducers of an array, to control the two related  
8              output signals to achieve predefined directivity and acoustic volume characteristics that are

9 varied with respect to a parameter associated with operation of the array, and to compensate  
10 for a change in radiated acoustic power spectrum of the array that results from the controlling  
11 of the signals.

1       16. The apparatus of claim 15 in which the circuitry comprises a dynamic  
2 equalizer.

1       17. The apparatus of claim 16 in which the dynamic equalizer includes a pair of  
2 signal processing paths and a combiner to combine signals that are processed on the two  
3 paths.

1       18. The apparatus of claim 15 also comprising a second input terminal to carry a  
2 signal indicating a volume level for use by the circuitry.

1       19. A sound system comprising,  
2           a source of related electrical signal components,  
3           a pair of electroacoustical transducer arrays, each of the arrays comprising  
4           a plurality of electroacoustical transducers driven respectively by said related  
5 electrical signal components, and  
6           an input terminal to receive an input audio electrical signal; and  
7           circuitry constructed and arranged to generate two related output audio electrical  
8 signals coupled to said electroacoustical transducers of an array, to control the two output  
9 signals to achieve predefined directivity and acoustic volume characteristics that are varied  
10 with respect to a parameter associated with operation of the array, and to compensate for a  
11 change in acoustic power spectrum of the array that results from the controlling of the  
12 signals.

1       20. The electroacoustical transducing apparatus in accordance with claim 11  
2 wherein said array comprises first and second closely spaced loudspeaker drivers having their  
3 axes angularly displaced by substantially 60 degrees.